



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF BACHELOR
OF SCIENCE IN BIOLOGICAL SCIENCES
SECOND YEAR FIRST SEMESTER 2018/2019 ACADEMIC YEAR
MAIN CAMPUS - REGULAR

COURSE CODE: SBI 3211
COURSE TITLE: BASIC MICROBIOLOGY
EXAM VENUE: STREAM: (BSC)
DATE: EXAM SESSION:
TIME: 2 HOURS

Instructions:

- 1. Answer ALL questions in Section A and Any two questions in Section B**
 - 2. Candidates are advised not to write on question paper**
 - 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**
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SECTION A: SHORT ANSWER QUESTIONS (30 Marks)

1. State three applications of microbiology in agriculture (3 marks)
2. State six differences between prokaryotic and eukaryotic cells (3 marks)
3. Using examples distinguish between psychrophiles and thermophiles (3 marks)
4. State the functions of the following components of the bacterial cell (3 marks)
 - i) Fimbriae
 - ii) Capsule
 - iii) Plasmid
5. Outline three characteristics of viruses (3 Marks)
6. List three characteristics of class Mastigophora (3 Marks)
7. Identify three types of ascocarps in class Ascomycetes (3 Marks)
8. State three characteristics of coliforms (3 Marks)
9. State three economic importance of algae to man (3 Marks)
10. Outline three methods of culture media and equipment sterilization (3 Marks)

SECTION B ESSAY QUESTIONS (40 Marks)

11. Discuss different stages of growth of a bacterial batch culture (20 Marks)
12. Discuss phases in the life cycle of animal viruses (20 Marks)
13. Describe the properties of functional types of microbiological culture media citing specific examples (20 Marks)
14. Discuss the principle and technique of gram staining (20 Marks)